

Work Order ID 130291

130291

Page 1

Wednesday, March 04, 2015 7:55:53 AM

Item ID: 647.7714 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Strut Tube
Start Date: 3/4/2015 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 3/4/2015 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: MCS Date: 15-03-04 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
647.7700	A								
110		0.00							
110						12	0		J.C.-L./JFC
Mill Conv	Memo	0.00							15/03/18
Conventional Milling Machine	1- CUT AS PER DWG 2- Mill end of tube as per dwg 3- DEBURR AS PER DWG								
120	QC Inspect dimensions to drawing	0.00							
120						12	0		J.C.-L./JFC
QC	Memo	0.00							15/03/18
Quality Control									
121	QC 8								
130	Identify as per dwg & Stock Location: _____	0.00							
130									
Packaging	Memo	0.00							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								

DAS
38
MAR 18 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order ID 130291

Wednesday, March 04, 2015 7:55:53 AM

130291

Page 2

Item ID: 647.7714

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Strut Tube

Start Date: 3/4/2015 Start Qty: 12.00

12

Cust Item ID:

Required Date: 3/4/2015 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

MLJ

JUN 03 2015

ME
15-6-3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Picklist Print

Page 1

Wednesday, March 04, 2015 7:55:56 AM

Work Order ID: 130291

130291

Parent Item: 647.7714

647 7714

Parent Item Name: Strut Tube

Start Date: 3/4/2015

Required Date: 3/4/2015

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV:A 15.01.07 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NT0.500W.083		Purchased		No			f	14.9550		8			

M4130NT0 500W 083

4130 RD tube .500 x .083W

Location

Loc Qty

Loc Code

MAT032

14.955

124293

14.955

6.652 J.C.-L.

13/03/18

DQA: _____ Date: _____



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WORK ORDER NON-CONFORMANCE / UPDATE

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APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 04741			SHEET 1 OF 1	
	DWG NO. 647.7700	REV: NC	PREPARED BY J. SOTO	DATE: 11/13/2014	EFFECT ON DWG ☒ INC. ☐ UNINC.
	DWG TITLE: STRUT ASSY				
APPROVED BY: ENGR <i>[Signature]</i>		MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF. NEXT ORDER	
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: CREATED NEW CONFIGURATION. ADDED F/N 5.			

STOP
 UNCL. 11/13/14
 130291 MGS
 15-03-04

5	A	647.7714	1	STRUT TUBE	△	
4	R	647.7713	1	STRUT THREAD	△	△
3	R	647.7712	1	STRUT TUBE	△	
	C	647.7703	X	STRUT ASSY		
F/N	TC	PART NUMBER	.7703			
		QTY		DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				CHANGE CATEGORY		
☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM				☐ MAJOR ☒ MINOR		
				DER REVIEW REQUIRED ☐ YES ☒ NO		

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Handling/Pre									
Material									
Operator									
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Process									
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Training									
Transport									
Unapproved									

FAULT CATEGORY

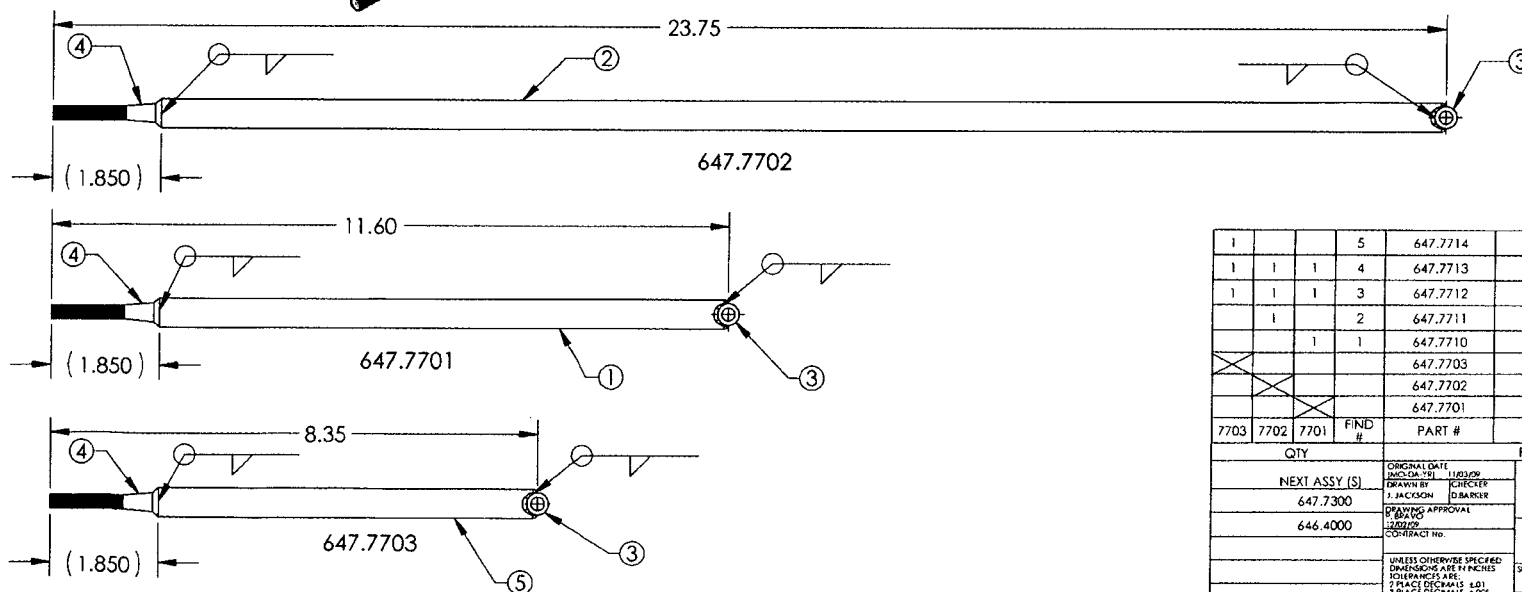
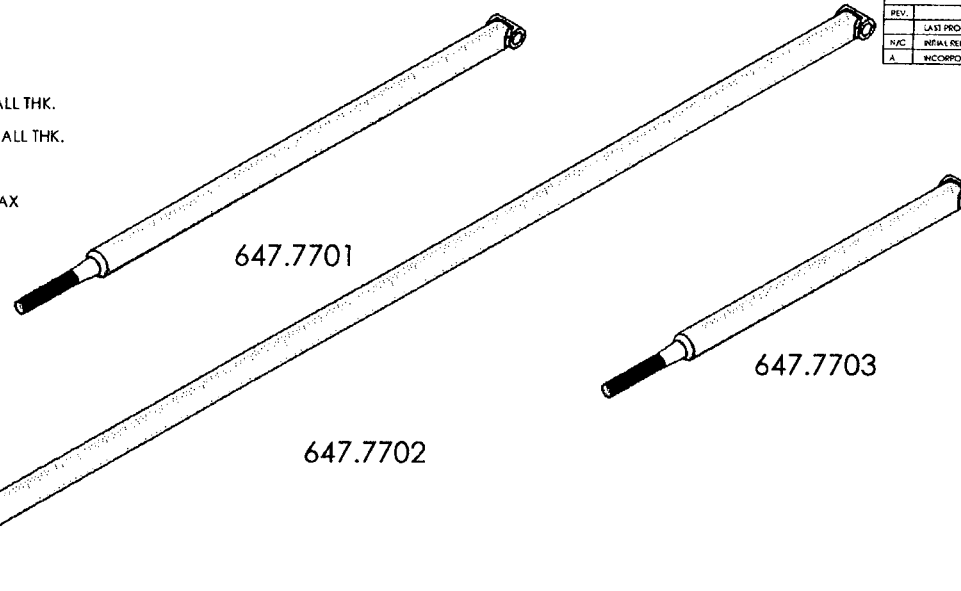
Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

NOTES:

- △ MATERIAL: 4130 STEEL PER AMS-T-6736, .50" OD, .083" WALL THK.
- △ MATERIAL: 4130 STEEL PER AMS-T-6736, .375" OD, .075" WALL THK.
- △ MATERIAL: 4130 STEEL PER AMS-T-6736, .324" OD.
- △ FINISH: PRIME IAW MIL-P-2337J TYPE I CLASS N; 1-2 MIL MAX
- 5. DEBURR AND BREAK ALL SHARP EDGES
- 6. IDENTIFY IAW MPP-120.
- △ WELD IAW MIL-STD-2219, TIG WELD WITH FILLER ROD
- △ FINISH: CAD PLATE IAW MIL-C-5541 CLASS 1A
- △ MASK THREAD PRIOR TO FINISH

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
LAST PROTOTYPE REVISION: P02			N/C
N/C	INITIAL RELEASE	12/02/09	P. BRAVO
A	INCORPORATED ECH 04741	11/13/11	P. BRAVO



1			5	647.7714	STRUT TUBE	△	
1	1	1	4	647.7713	STRUT THREAD	△	△
1	1	1	3	647.7712	STRUT TUBE	△	
	1		2	647.7711	STRUT TUBE	△	
		1	1	647.7710	STRUT TUBE	△	
				647.7703	STRUT ASSY		△△
				647.7702	STRUT ASSY		△△
				647.7701	STRUT ASSY		△△
7703	7702	7701	FIN	PART #	DESCRIPTION	MAT'L	SPEC.
QTY				PARTS LIST			
NEXT ASSY (S)				ORIGINAL DATE			
647.7300				JACKSON 11/03/09			
646.4000				DRAWN BY J. JACKSON			
				CHECKED BY D. BARNER			
				DRAWING APPROVAL P. BRAVO			
				12/02/09			
				CONTRACT NO.			
				UNLESS OTHERWISE SPECIFIED			
				DIMENSIONS ARE IN INCHES			
				DECIMALS ARE 2 PLACES			
				ANGLES ± .5°			
				SEE CAGE CODE			
				B 07M26			
				DWG. NO. 647.7700			
				SCALE NONE			
				SHEET 1 OF 2			

APICAL INDUSTRIES
 2608 TEMPLE HEIGHTS DR.
 OCEANSIDE, CA. 92056-3512 (760)724-5300

STRUT ASSY

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

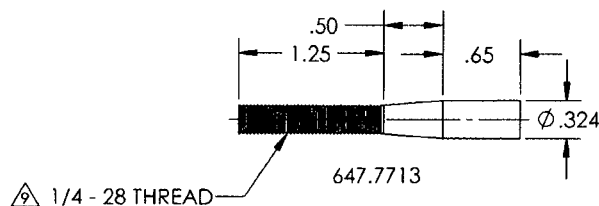
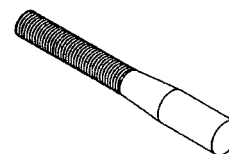
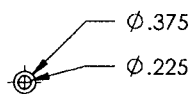
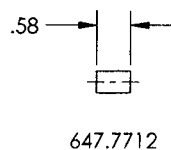
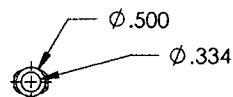
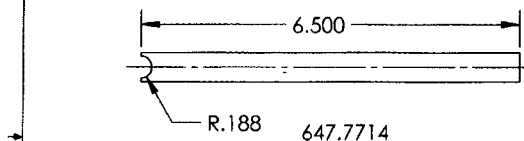
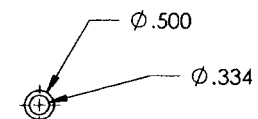
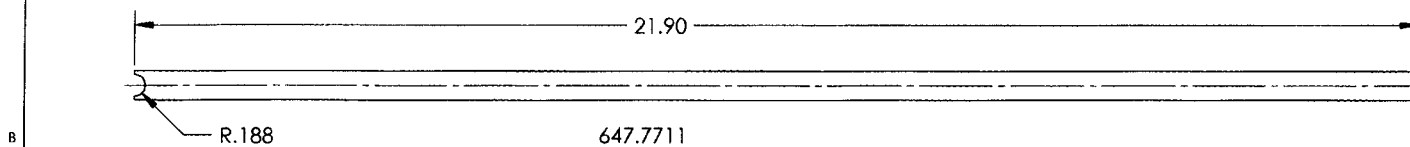
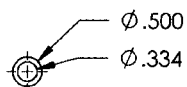
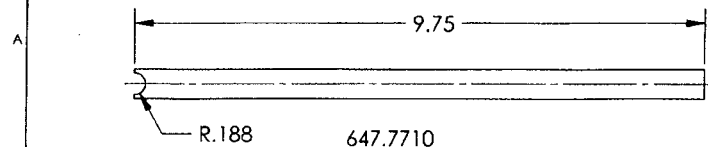
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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ORIGINAL DATE 11/03/08		APICAL INDUSTRIES	
DRAWN BY J. JACKSON		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
CHECKED BY P. BRAVO		STRUT ASSY	
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	REV. A
SCALE: NONE		SHEET 2 OF 2	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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